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## Listing of Claims

Claim 1 (Previously Amended): A method of providing differentiated services for IP packets transported on an asynchronous transfer mode (ATM) backbone, said method comprising:

provisioning a first switched virtual circuit (SVC) and a second SVC on said ATM backbone, each of said first SVC and said second SVC being provisioned as a unicast point-to-point virtual circuit terminating between same end devices;

receiving an IP packet,

determining whether to send said IP packet on said first SVC or said second SVC according to services desired to be provided for said IP packet, and

sending said IP packet on the determined one of said first SVC or said second SVC.

Claim 2 (Previously Amended): The method of claim 1, wherein said determining comprises examining a header of said IP packet and wherein said services desired for said IP packet being based on said header.

Claim 3 (Previously Amended): The method of claim 2, wherein said determining further comprises maintaining a table indicating a specific one of said first SVC and said second SVC on which to send IP packets having a specific precedence value in a type of service (TOS) field in said header, wherein said IP packet is sent on either said first SVC or said second SVC according to the data stored in said table.

Claim 4 (Original): The method of claim 3, wherein said table indicates that a plurality of precedence values are to be mapped to the same SVC.

Claim 5 (Original): The method of claim 3, wherein said provisioning comprises initiating a set up request from a first router to a second router to set up said first SVC, wherein said first router and said second router interface directly with said ATM backbone, wherein said set up request is sent only after reception of a first IP packet to be

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Attorney Docket No.: CSCO-008/4339 Amendment Dated: December 20, 2005 sent on said first SVC, wherein said first SVC is provisioned between said first router and 5 said second router. 6 Claim 6 (Original): The method of claim 5, wherein said second router also sends 1 2 on said first SVC the IP packets having the same precedence value as said first IP packet. Claim 7 (Previously Amended): The method of claim 6, further comprising sending 1 a precedence data from said first router to said second router, wherein said precedence data 2 indicates that the precedence value of said first IP packet is to be associated with said first 3 SVC such that said second router can send packets with the same precedence value on said 4 first SVC. 5 Claim 8 (Previously Amended): The method of claim 7, wherein said precedence 1 2 data is contained in a signaling set up message representing said set up request. 1 Claim 9 (Original): The method of claim 8, wherein said precedence data is encoded in a broadband higher layer information (BHLI) information element (IE) contained in said 2 signaling set up message. 3 Claim 10 (Original): The method of claim 9, wherein each of said first router and 1 2 said second router comprises an edge router. Claim 11 (Previously Amended): The method of claim 5, wherein said table stores 1 an IP address, a network service access point (NSAP) of said second router, a precedence 2 value contained in said header, and a SVC identifier in each row. 3 Claim 12 (Withdrawn): A method of providing differentiated services for IP packets 1 transported on an asynchronous transfer mode (ATM) backbone, said method being 2

performed in a receiving router, said method comprising:

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4	receiving in said receiving router a set	up request from another router, wherein said
5	set up request requests setting up of a switched virtual circuit (SVC), said another router	
6	sending all IP packets having a specific precedence value on said SVC;	
7	configuring said receiving router to terminate said SVC in said receiving router;	
8	sending an acknowledgment confirming setting up of said SVC; and	
9	sending a plurality of IP packets having the same precedence value as said specific	
10	precedence value on said SVC.	
1	Claim 13 (Withdrawn): The method	of claim 12, further comprising receiving a
2	precedence data from said another router data indicating that said specific precedence	
3	value is associated with said SVC.	
1	Claim 14 (Withdrawn): The method of	of claim 13, wherein said precedence data is
2	contained in a Signaling set up message repre	esenting said set up request.
1	Claim 15 (Withdrawn): The method of	of claim 14, wherein said precedence data is
2	encoded in a broadband higher layer information (BHLI) information element (IE)	
3	contained in said Signaling set up message.	
1	Claim 16 (Previously Amended): A ro	uter for providing differentiated services for
2	IP packets transported on an asynchronous	ransfer mode (ATM) backbone, said router
3	comprising:	
4	means for provisioning a first switche	d virtual circuit (SVC) and a second SVC on
5	said ATM backbone, each of said first SVC	and said second SVC being provisioned as a
6	unicast point-to-point virtual circuit terminating between same end devices;	
7	means for receiving an IP packet;	
8	means for determining whether to se	nd said IP packet on said first SVC or said
9	second SVC according to services desired to	be provided for said IP packet, and

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Reply to Office Action of October 31, 2005 Appl. No.: 09/904,593 Attorney Docket No.: CSCO-008/4339 Amendment Dated: December 20, 2005 means for sending said IP packet on the determined one of said first SVC or said 10 11 second SVC. Claim 17 (Previously Amended): The router of claim 16, wherein said means for 1 2 determining examines a header of said IP packet to determine whether to send said IP packet on said first SVC or said second SVC and wherein said services desired for said 3 4 IP packet being based on said header. Claim 18 (Previously Amended): The router of claim 17, wherein said means for 1 determining further maintains a table indicating a specific one of said first SVC and said 2 3 second SVC on which to send IP packets having a specific precedence value in a type of service (TOS) field in said header, wherein said IP packet is sent on either said first SVC 4 or said second SVC according to the data stored in said table. 5 Claim 19 (Original): The router of claim 18, wherein said table indicates that a 1 plurality of precedence values are to be mapped to the same SVC. 2 1 Claim 20 (Previously Amended): The router of claim 18, wherein said means for 2 provisioning initiates a set up request to another router to set up said first SVC, wherein 3 said set up request is sent only after reception of a first IP packet to be sent on said first SVC, wherein said first SVC is provisioned to terminate at said another router. 4 Claim 21 (Original): The router of claim 20, wherein said another router also sends 1 2 on said first SVC the IP packets having the same precedence value as said first IP packet.

for sending a precedence data to said another router, wherein said precedence data indicates that the precedence value of said first IP packet is to be associated with said first

Claim 22 (Previously Amended): The router of claim 21, further comprising means

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4	SVC such that another router can send packets with the same precedence value on said firs		
5	SVC.		
1	Claim 23 (Previously Amended): The router of claim 22, wherein said precedence		
2	data is encoded in a broadband higher layer information (BHLI) information element (IE)		
3	contained in a Signaling set up message.		
1	Claim 24 (Withdrawn): A receiving router for providing differentiated services for		
2	IP packets transported on an asynchronous transfer mode (ATM) backbone, said receiving		
3	router comprising:		
4	means for receiving in said receiving router a set up request from another router,		
5	wherein said set up request requests setting up of a switched virtual circuit (SVC), said		
6	another router sending all IP packets having a specific precedence value on said SVC;		
7	means for configuring said receiving router to terminate said SVC in said receiving		
8	router;		
9	means for sending an acknowledgment confirming setting up of said SVC; and		
10	means for sending a plurality of IP packets having the same precedence value as		
11	said specific precedence value on said SVC.		
1	Claim 25 (Withdrawn): The receiving router of claim 24, further comprising means		
2	for receiving a precedence data from said another router data indicating that said specific		
3	precedence value is associated with said SVC.		
1	Claim 26 (Withdrawn): The receiving router of claim 25, wherein said precedence		
2	data is encoded in a broadband higher layer information (BHLI) information element (IE)		
3	contained in a signaling set up message.		
1	Claim 27 (Currently Amended): A computer readable medium carrying one or more		
2	sequences of instructions for causing a router to provide differentiated service to IF		

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Reply to Office Action of October 31, 2005 Appl. No.: 09/904,593 Attorney Docket No.: CSCO-008/4339 Amendment Dated: December 20, 2005 packets transported on an asynchronous transfer mode (ATM) backbone, wherein 3 execution of said one or more sequences of instructions by one or more processors 4 contained in said router causes said one or more processors to perform the actions of: 5 provisioning a first switched virtual circuit (SVC) and a second SVC on said ATM 6 7 backbone, each of said first SVC and said second SVC being provisioned as a unicast point-to-point virtual circuit terminating between same end devices; 8 9 receiving an IP packet, determining whether to send said IP packet on said first SVC or said second SVC 10 according to services desired to be provided for said IP packet, and 11 sending said IP packet on the determined one of said first SVC or said second SVC. 12 1 Claim 28 (Previously Amended): The computer readable medium of claim 27, 2 wherein said determining comprises examining a header of said IP packet and wherein said 3 services desired for said IP packet being based on said header. 1 Claim 29 (Previously Amended): The computer readable medium of claim 28, 2

Claim 29 (Previously Amended): The computer readable medium of claim 28, wherein said determining further comprises maintaining a table indicating a specific one of said first SVC and said second SVC on which to send IP packets having a specific precedence value in a type of service (TOS) field in said header, wherein said IP packet is sent on either said first SVC or said second SVC according to the data stored in said table.

Claim 30 (Original): The computer readable medium of claim 29, wherein said table indicates that a plurality of precedence values are to be mapped to the same SVC.

Claim 31 (Original): The computer readable medium of claim 29, wherein said provisioning comprises initiating a set up request to another router to set up said first SVC, wherein said first router and said another router interface directly with said ATM backbone, wherein said set up request is sent only after reception of a first IP packet to be

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- sent on said first SVC, wherein said first SVC is provisioned between said first router and said another router.
  - Claim 32 (Original): The computer readable medium of claim 31, wherein said another router also sends on said first SVC the IP packets having the same precedence value as said first IP packet.
    - Claim 33 (Previously Amended): The computer readable medium of claim 32, further comprising sending a precedence data to said another router, wherein said precedence data indicates that the precedence value of said first IP packet is to be associated with said first SVC such that another router can send packets with the same precedence value on said first SVC.
    - Claim 34 (Original): The computer readable medium of claim 33, wherein said precedence data is encoded in a broadband higher layer information (BHLI) information element (IE) contained in a signaling set up message.
    - Claim 35 (Previously Amended): The computer readable medium of claim 33, wherein said table stores an IP address, a network service access point (NSAP) of said second router, a precedence value contained in said header, and a SVC identifier in each row.
    - Claim 36 (Withdrawn): A computer readable medium carrying one or more sequences of instructions for causing a router to provide differentiated service to IP packets transported on an asynchronous transfer mode (ATM) backbone, wherein execution of said one or more sequences of instructions by one or more processors contained in said router causes said one or more processors to perform the actions of:

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Claim 40 (Previously Amended): The router of claim 39, wherein said ATM encapsulator examines a header of said IP packet to determine whether to send said IP packet on said first SVC or said second SVC and wherein said services desired for said IP packet being based on said header.

Claim 41 (Previously Amended): The router of claim 40, wherein said SVC table indicates a specific one of said first SVC and said second SVC on which to send IP packets having a specific precedence value in a type of service (TOS) field in said header, wherein said IP packet is sent according to the data stored in said table.

Claim 42 (Original): The router of claim 41, wherein said table indicates that a plurality of precedence values are to be mapped to the same SVC.

Claim 43 (Previously Amended): The router of claim 42, further comprising a signaling block for initiating a set up request to another router to set up said first SVC, wherein said set up request is sent only after reception of a first IP packet to be sent on said first SVC, wherein said first SVC is provisioned to terminate at said another router.

Claim 44 (Original): The router of claim 43, wherein said another router also sends on said first SVC the IP packets having the same precedence value as said first IP packet.

Claim 45 (Previously Amended): The router of claim 44, wherein said signaling block sends a precedence data to said another router, wherein said precedence data indicates that the precedence value of said first IP packet is to be associated with said first SVC such that another router can send packets with the same precedence value on said first SVC.

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Claim 46 (Original): The router of claim 45, wherein said precedence data is encoded in a broadband higher layer information (BHLI) information element (IE) contained in a signaling set up message.

Claim 47 (Previously Amended): The router of claim 41, wherein said SVC table stores a network service access point (NSAP) address and IP address of an edge router at the next hop associated with each SVC, wherein said encapsulator sending as a key to said table a IP address of an edge router at the next hop and a precedence value in each received IP packet to determine whether to send said IP packet on said first SVC or said second SVC.

## Claims 48 - 51: (Canceled)

Claim 52 (New) The method of claim 1, wherein said ATM backbone comprises a plurality of switches, wherein said provisioning includes at least one additional switch between said same end devices for said first SVC, wherein said additional switch is contained in said plurality of switches.

Claim 53 (New) The router of claim 16, wherein said ATM backbone comprises a plurality of switches, wherein said means for provisioning includes at least one additional switch between said same end devices for said first SVC, wherein said additional switch is contained in said plurality of switches.

Claim 54 (New): The computer readable medium of claim 27, wherein said ATM backbone comprises a plurality of switches, wherein said provisioning includes at least one additional switch between said same end devices for said first SVC, wherein said additional switch is contained in said plurality of switches.

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Claim 55 (New): The router of claim	39, wherein said ATM backbone comprises

a plurality of switches, wherein said first SVC contains at least one additional switch between said same end devices, wherein said additional switch is contained in said

4 plurality of switches.